

**ABSTRACT**

A voltage regulator includes a constant current circuit which is connected between an input node with which a power supply voltage is supplied and an output node to which a load is connected and which supplies constant current to the output node. The voltage regulator also includes a first transistor which is provided in parallel to the constant current circuit and which flows insufficient current to the output node when current flowing through the load is larger than the constant current and a second transistor which is provided between the output node and a common potential node and which flows surplus current to the common potential node when current flowing through the load is less than the constant current. The voltage regulator also includes a control circuit which controls a conductive state of the first and the second transistors so that an output voltage of the output node is maintained at constant voltage.

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